

RECEIVED
CENTRAL FAX CENTER

JAN 08 2007

Tyco Docket No. 18060 (20958-2113)

Via Facsimile Transmission 571.273.8300

Remarks

Claims 1-21 were pending in the present application, from which claims 10-21 have been withdrawn from consideration. By this amendment, claims 3 and 19-21 have been cancelled and new claims 22-24 have been added. It is respectfully that the pending claims define allowable subject matter.

Initially, it is noted that in paragraph 5 of the Office Action it is indicated that claims 3-5 were considered withdrawn. It is respectfully submitted that the outstanding Office Action is improper and incomplete as claims 3-5 were not examined on the merits, yet should have been. In the prior Office Action of August 10, 2006, a Restriction Requirement was maintained stating that three distinct inventions of Groups I, II and III were claimed. By the examiner's original division of claims, the examiner indicated that claims 1-9 were directed to a single invention of Group I, while claims 10-15 were directed to a second invention of Group II and claims 16-21 were directed to a third invention of Group III. In a response submitted September 7, 2006, the invention of Group I was elected pertaining to claims 1-9. No claim amendments were made at the time of the election of Group I. Now in the outstanding Office Action, the examiner has improperly sought to further separate the claims of Group I (claims 1-9) by incorrectly alleging that claims 3-5 are withdrawn from consideration "since they are drawn to an extraction mechanism and extractor", while claim 1 (allegedly) concerns an installation mechanism and actuator. The examiner has misinterpreted claim 1 and has improperly sought to withdraw claims 3-5. Claim 1 recites an installation mechanism, an extraction mechanism and an actuator. By the clear language of claim 1, at least one of the installation and extraction mechanisms comprise the actuator. Contrary to the examiner's note in the outstanding Office Action at page 3, paragraph 5, claim 1 is not directed to an installation mechanism and an actuator alone. Claim 1 clearly recites an installation mechanism and an extraction mechanism, and an actuator comprised within at least one of the installation and extraction mechanisms. Therefore, claims 3-5 should have been examined on the merits and are not withdrawn. The Applicant did not withdraw claims 3-5. Claims 3-5 were within Group I as defined in the examiner's prior Office Action of August 10, 2006. Consequently, the outstanding Office Action is incomplete and does

JAN 08 2007

Tyco Docket No. 18060 (20958-2113)

Via Facsimile Transmission 571.273.8300

not examine each of the pending non-withdrawn claims. Therefore, it is requested that the outstanding Office Action be treated as non-final and incomplete, and a new Office Action be provided that properly examines all of the non-withdrawn claims.

Turning to the substantive paragraphs of the rejection, it is believed that above claim amendments overcome the indefiniteness issues raised with respect to claims 1-9. The claims positively recite a tool, and do not recite the circuit board or connector as claim limitations.

Claims 1-2 and 6-9 have been rejected under 35 U.S.C § 102(b) as being anticipated by Sittner. Applicants respectfully traverse this rejection.

Claim 1 defines a tool that comprises an installation mechanism, an extraction mechanism and an actuator. The actuator includes extraction pins that are configured to align with a pin aperture field that is included on a second surface of a circuit board to which the tool is attached. The extraction pins extend into the pin aperture field to force a connector from the first surface of the circuit board during an extraction operation.

Sittner fails to teach or suggest any such tool. First, Sittner does not describe an extraction mechanism of any form, let alone one that is coupled to an installation mechanism. In the outstanding Office Action, it is suggested that items 219 and 220 in Figure 8E of Sittner constitute an extraction mechanism. This is not correct. Instead, items 219 and 220 represent clipping jaws that close to clip leads that extend through a circuit board. The clipping jaws 219 and 220 bend the leads over against the under surface of the circuit board. Attention is directed to column 17, lines 27-66, which describes the operation of the clipping jaws 219 and 220. When the operation of the clipping jaws of 219 and 220 is fully understood, it is clear that the jaws 219 and 220 represent part of Sittner's component installation assembly, and do constitute an extraction mechanism that removes a connector from the first surface of the circuit board. As clearly established in claim 1, the installation mechanism is configured to be positioned proximate a first side of the circuit board, while the extraction mechanism is configured to be positioned proximate the second surface of the circuit board. Sittner teaches no such combination of installation and extraction mechanisms. Claim 1 further establishes that the

Tyco Docket No. 18060 (20958-2113)

Via Facsimile Transmission 571.273.8300

installation mechanisms inserts connectors onto the first surface of circuit board, while the extraction mechanism removes connectors from the first surface of the circuit board. Again, there is no discussion within Sittner of any mechanism for removing connectors from a surface of the circuit board that is separate and distinct from the installation assembly.

Further, nowhere does Sittner teach or suggest the claimed actuator which includes a plurality of extraction pins that are aligned with a pin aperture field on the second surface of the circuit board. The claimed extraction pins extend into the pin aperture field on the second surface of the circuit board to force the connector from the opposite first surface of the circuit board. Sittner teaches no such structure. Sittner's component placement apparatus does not include a plurality of extraction pins. Sittner's component placement apparatus does not extend any pins into pin apertures on a second surface of the circuit board to force a connector from the opposite first surface of the circuit board. Thus, Sittner fails to teach or suggest the claimed tool.

The elected dependent claims 2-9 define additional details of the claimed tool that are not taught or suggested by Sittner. In addition, new dependent claims 22-24 also define further features of the tool that are absent from the prior art.

Claim 22 further defines the extraction mechanism to include front and rear support plates and a plurality of modular blocks mounted between and held stationary with respect to the support plates. The modular blocks are held stationary against the second surface of the circuit board. The actuator is movably held between the support plates and the between the modular blocks. Sittner lacks any extraction mechanism and similarly lacks the detailed elements recited in claim 22 for an extraction mechanism.

Claim 23 further defines the extraction mechanism to include front and rear support plates and the actuator to include an actuator element, an actuator block and an extractor block all located between the support plates. The actuator block is held stationary with respect to the support plates, while the actuator elements moves the actuator block toward and away from the second surface of the circuit board when the actuator element is rotated. The actuator block includes the extraction pins that, as defined in claim 1, extend into the pin aperture field on the

Tyco Docket No. 18060 (20958-2113)

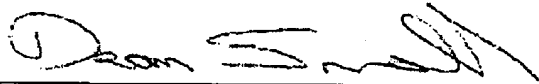
Via Facsimile Transmission 571.273.8300

second surface of the circuit board to force the connector from the first surface of the circuit board. Again, Sittner lacks any such structure.

Claim 24 further defines the extractor mechanism to include front and rear support plates and a board guide pin that secures the extraction and installation mechanisms to one another. The actuator includes an actuator element and an extractor element. The actuator element moves the actuator block toward and away from the second surface of the circuit board when the actuator element is rotated. Again, the actuator element is defined to include the extraction pins. Nothing like the claimed extraction mechanism or actuator are taught or suggested by the prior art.

In view of the foregoing, it is respectfully submitted that the pending claims are final law of the subject matter. Should anything remain in order to test the present application in condition for allowance, the examiner is kindly invited to contact the owner signed at the telephone number listed below.

Respectfully submitted,

Date: January 8, 2007

Dean Small (Reg. No. 34,730)
THE SMALL PATENT LAW GROUP LLP
611 Olive Street, Suite 1611
St. Louis, MO 63101
314-584-4081